Title: Ordering, Adding, and Subtracting Integers

Brief Overview:

This unit will prepare students to develop comprehension of and calculate integers. Teacher will introduce the concept of positive and negative integers using number lines, manipulatives, and cooperative learning. Students will participate in whole–class and group movement activities in order to facilitate understanding of positive and negative integers, the Zero Principle, and addition and subtraction of integers.

NCTM Content Standard/National Science Education Standard:

Number and Operations

- To select appropriate methods and tools for computing integers from among mental computation, estimation, calculators or computers, and paper and pencil, depending on the situation, and apply the selected methods.
- To develop meaning for integers and represent and compare quantities for them

Grade/Level:

Grades 6–8, Pre–Algebra

Duration/Length:

Three 80–minute lessons

Student Outcomes:

Students will:

- Recognize integers as whole numbers and their opposites.
- Find absolute value of integers.
- Compare and order integers.
- Solve problems using addition and subtraction.

Materials and Resources:

- Masking Tape
- Two–color counters: (Red and yellow integer 'bingo' chips)
- Red and yellow colored pencils for each student (or for students to share)
- Red and yellow dot stickers
- Worksheets:
  - City Temperatures – Where Do You Want To Live?
  - Depths of the Sea

- Adding Integers – Put It Together, and transparency of same
- Subtracting Integers – Make It Happen, and transparency of same
- Quiz 1

- Attachments
  - Integer Cards
  - "Gains & Losses" Rules and template
  - "Go For The Most" Rules and template
  - "Integer Card Duel" Rules and template
  - "Labeled Number Line" for re–teaching, as necessary
  - "Blank Number Line" for re–teaching, as necessary

Development/Procedures:

Lesson 1

Preassessment – Discuss with students hot and cold temperatures in different cities. What temperatures do students think of as hot? Which cities would have the coldest temperatures? How do they know a temperature is cold?

Launch – Provide the worksheet, "City Temperatures – Where Do You Want To Live?", for students to work on cooperatively in groups of two. Explain that students need to put the temperatures in order from the hottest to the coldest city. They then select the city in which they want to live, and explain why they want to live there.

Teacher Facilitation – Discuss where the students want to live and why, making connections to temperature. Use sentence strips to present the following words positive; negative;, and integer, and their definitions. Transfer the sentence strips to a Word Wall. Connect the vocabulary to the launch activity by discussing how the temperatures represent positive and negative integers.

Teacher Facilitation – Post "absolute value" using sentence strips. Define "absolute value" as being the distance a number is away from zero. Show students how absolute value is written, such as, | -15| and | 8|, and how to simplify, | -15| = 15 and | 8| = 8. Transfer the word to the Word Wall. Write examples on overhead and asks students to simplify.

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Deleted: |–15| and |8|

| -25| | 19| | 0| | -30| | 4| | -17|

Student Application – Prior to the beginning of class, tape a large number line on one wall in the room. Place an 'L' at the left of the number line to stand for 'least', and a 'G' at the right of the number line to stand for 'greater'. Select one student to be the "Integer Boss." All other students select a card from the

attachment, “Integer Cards.” Instruct the students with Integer Cards stand in random order at the front of the room. The Integer Boss places students in order from least to greatest below the taped number line along the wall.

Students hold the Integer Cards in front of them. They discuss whether they agree or disagree with the Integer Boss that they are in the right order. Ask the Integer Boss to name a pair of opposites. Other students determine whether the Boss is correct, and why. Ask the Integer Boss to name the absolute value of integers that some of the students are holding. Students holding those integers determine whether the Boss is correct.

Embedded Assessment – Assess student understanding by checking responses during the “Integer Boss” activity. Further assess student understanding by checking the City Temperature and Depths of the Sea worksheets.

Reteaching/Extension –

- Students who have understood the lesson may work independently on the worksheet, “Depths of the Sea Worksheet”.
- Students needing additional assistance based on teacher’s embedded assessment may work in a small group with the teacher on the worksheet, “Depths of the Sea”.

Lesson 2

Preassessment – Introduce the attachment, “Gains & Losses” .This activity mimics a football game, and introduces students to adding integers.

Launch – Introduce the concept of opposites by listing pairs of real world opposites on overhead, such as on/off, stop/go, in/out, up/down, etc. Students are called on to read each pair aloud. Once all pairs are read, ask what the pairs have in common, leading students to say ‘opposites’. Write on the overhead “2 and –2”; “5 and –5”; and “10 and –10”. Call on students to provide the relationship between the two numbers, leading students to say ‘opposites’. Introduce the Zero Principle to students as well as its definition, ‘Two numbers whose sum equals zero.’ Add this to the Word Wall.

Teacher Facilitation – Distribute the red and yellow two–color counters to students. Explain to the students that the red side represents negative integers and the yellow side represents positive integers. Illustrate addition of two positive integers using yellow

chips. Display the problem 2 + 3 = 5. Lead the following dialog with students:

Teacher: "Addition is 'putting together.' Start with positive two, represented by two yellow chips. 'Put together' three yellow chips with the two yellow chips. How many chips do you have?
Student: "Five."
Teacher: "What color are the chips?"
Student: "Yellow."
Teacher: "What does yellow mean?"
Student: "Positive."
Teacher: "So, five yellow chips is positive five."

Teacher illustrates addition of two negative numbers in the same manner, using the red chips, with the same dialog. Teacher models as many problems as necessary to facilitate student understanding using the addition language and the integer chips. Project basic addition problems using the same sign on the overhead for students to complete with their partner and the two color counters:

4 + 6	2 + 7	3 + 4
-3 + -5	-4 + -7	-6 + -2

Monitor student progress, providing assistance where needed.

Teacher Facilitation – Remind students of the "Zero Pairs" concept. Discuss with students, "Addition is 'putting together.' When we add positive numbers, we are 'putting together' two groups of positive (or yellow) chips. When we add positive numbers to negative numbers, we do the same thing. This time, we're adding red chips to yellow chips." Model 1 + (-1) = 0 by putting together one yellow chip and one red chip. Reiterate the concept of "Zero Pairs" by creating a scene about boys and girls at a dance: "Yellow chips represent the boys and red chips represent girls. When the slow song comes on, the boys want to pick a girl to dance with. So, when the boy (yellow) meets the girl (red) on the dance floor, they have this magical connection. They forget about dancing and leave the dance floor and disappear (zero) to have punch."

Practice addition of integers using the two color counters, guiding the students to the rules for addition:

Addition Rules:

1. Same signs: add and keep the sign

2. Different signs: Subtract and take the sign of the larger absolute value number.

Student Application – Give each student a small set of either red or yellow dot stickers. For each set of red stickers given to one student, the same number of yellow stickers should be given to another student. Avoid giving the same number of red stickers to any one student. Instruct the red students to pair up with a yellow student so they form "Zero Pairs". These are the pairs in which they will be working for this activity. Give the students problems to simplify with integer chips. Differentiate instruction based on student needs. When students can complete several problems using the chips, pass out the worksheet, "Adding Integers – Put It Together", along with red and yellow colored pencils. Model drawing and coloring circles at the top of the worksheet to represent the positive and negative integers in the problem. Continue to model grouping "Zero Pairs" by crossing them off. Based on student understanding, allow individual groups to continue the remainder of worksheet without drawing the chips.

Embedded Assessment – Review student work with two–color counters (concrete application); drawing their own chips and crossing out Zero Pairs (semi–concrete application); and solving problems using numbers (abstract application).

Reteaching/Extension –

- Students who have understood the lesson may work independently on an MSA question.
- Students needing additional assistance continue work with two–color counters.

Lesson 3

Preassessment – Review addition principles of positive and negative integers by putting various problems on the overhead for students to solve using the chips with their partner. Remind students that, once they were able to make Zero Pairs with their chips, they crossed them out.

Launch – Review Zero Pairs instruction by reminding students how they found opposites (on/off, stop/go, 1/–1, –10/10) and that one positive and one negative equals zero. Write "addition" and ask for the inverse operation ("subtraction"). Say, "If 'addition' means putting together, then 'subtraction' means taking away/losing." Record this information on overhead.

Teacher Facilitation – Teacher passes out red and yellow integer chips to students, reminding students that yellow counters represent positive numbers and red counters represent negative numbers. Teacher illustrates subtraction to the whole class following this student-teacher dialog:

Teacher: "Read the problem 3 – 2 = 1 aloud."
Student: "Positive three 'take away' positive two."
Teacher: "Subtraction is 'taking away' or 'losing.' Start with three yellow chips. Can we take away or lose two yellow chips?"
Student: "Yes."
Teacher: (Take away two yellow chips.) "How many chips do you have left?
Student: "One."
Teacher: "What color is it?"
Student: "Yellow."
Teacher: "What does yellow represent?"
Student: "Positive.)"
Teacher: "So, one yellow chip represents positive one."

Continue the teacher-student dialog to illustrate subtraction of two negative numbers.

Teacher: "Read the problem –3 – (-2) = -1 aloud."
Student: "Negative three take away negative two."
Teacher: "Start with three red chips. Can we take away/lose two red chips?"
Student: "Yes."
Teacher: (Take two away.) "How many do we have left?"
Student: "One."
Teacher: "What color is it?"
Student: "Red."
Teacher: "What does red mean?"
Student: "Negative."
Teacher: "So, one red chip means negative one."

Model as many problems as necessary to facilitate student understanding using the subtraction language. Teacher then gives students basic subtraction problems using the same sign on the overhead to do with their partner and the two color counters

6 - 3	10 - 7	5 - 4
-5 – (-3)	-4 – (-4)	-6 – (-2)

Monitor student progress, providing assistance where needed.

Teacher Facilitation – Teacher reminds students of the "Zero Pairs" concept, providing as many examples as necessary. Continue student-teacher dialog to bring in problems which involve adding zero pairs, such as 2 - 5. Write 2 - 5 on the overhead.

Teacher: "What happens when we have a problem like 2 - 5? Read this problem aloud. "
Student: "Positive two take away positive five."
Teacher: (Allow students to explore with their partners ways to solve this problem. Teacher asks students for possible solutions before continuing with the dialog.) "Subtraction is 'taking away,' or 'losing.' Start with two yellow chips. Do we have five yellow chips to take away?"
Student: "No."
Teacher: "How can we 'Make It Happen'? What is the value of a 'Zero Pair'?"
Student: "Zero."
Teacher: "So, if we add zero to any number, we still have the original number." (Model adding in three Zero Pairs.) "Now we have five yellow chips to take away. How many chips are left?"
Student: "Three."
Teacher: "What color are they?"
Student: "Red."
Teacher: "What does red represent?"
Student: "Negative."
Teacher: "So, three red chips represent negative three. Our answer to 2 – 5 is negative three."

Give students basic subtraction problems involving the "Zero Pair" concept, using the same sign on the overhead to do with their partner and the two color counters:

3 - 6	7 - 10	4 - 5
2 - 8	-3 – (-4)	-2 – (-6)

Once students practice subtraction of integers using the two color counters, guide students to discover the rules for subtraction.

Subtraction Rules:

1. Change the subtraction sign to addition.
2. Change the sign of the second number.

3. Follow the rules for addition.

Monitor student progress, providing assistance where needed.

Student Application – Again, hand out red or yellow dot stickers to each student so students can make "Zero Pairs" with each other. Students work in pairs with two–color counters to solve problems. Differentiate instruction based on student needs. When students can complete several problems using the two–color counters, pass out the worksheet, "Subtracting Integers – Make It Happen", along with red and yellow colored pencils. Model drawing and coloring circles at the top of the worksheet to represent the positive and negative integers in the problem. Model grouping "Zero Pairs" and crossing them off. Determine, based on student understanding, which groups can continue remainder of worksheet without drawing the counters.

Embedded Assessment – Review student work with two–color (concrete application); drawing their own two–color counters and crossing out Zero Pairs (semi–concrete application); and solving problems using numbers (abstract application).

Reteaching/Extension –

- Students play "Go for The Most".
- Students who have understood the lesson solve the problems on paper to play this game.
- Students needing additional assistance may use the two–color counters for the game.

Summative Assessment:

At the end of the unit, students take a quiz to determine their understanding of addition and subtraction with integers. Students may use the two–color counters and/or colored pencils while taking the quiz, if they wish. Teacher uses quiz to determine mastery levels and to determine whether any concepts need to be re–taught. When students finish quiz, they may get into small groups and play Integer Card Duel.

Authors:

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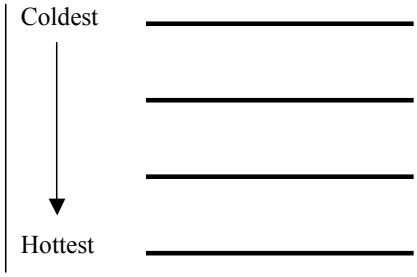
County/Jurisdiction: Baltimore, MD

Where Would You Live?

Name: _____
Date: _____

1. Using the map, list the cities in order from coldest to hottest.



2. Which city would you most like to live and why?

_____
_____
_____
_____
____

Where Would You Live?

Name: _ANSWER KEY____
Date: _____

1. Using the map, list the cities in order from coldest to hottest.

Coldest
Portland
Fargo
Houston
Hottest
Los Angeles

2. Which city would you most like to live and why?

_____
_____
_____
_____
____

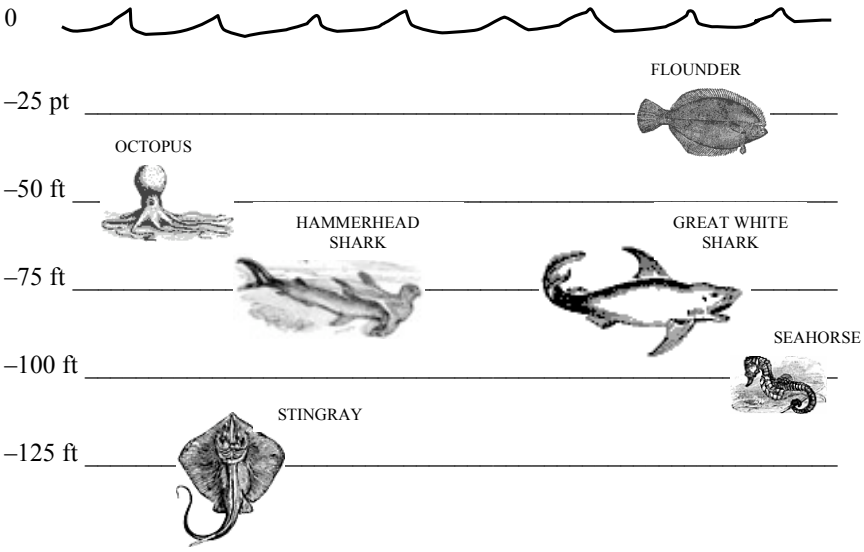
Depths of the Sea

Name: _____
Date: _____

Directions: Using the picture below, answer the following questions.

1. What sea creature is at a depth of –100ft? _____
2. The stingray is how many feet below the surface? _____
3. Which two sea creatures are at the same depth?
   _____
4. What is the depth of the octopus? _____
5. Give the absolute value for the following depths:

   a. | -25 | b. |100 | c. | -50 |



Bonus: Which of these sea creatures do you like the most and why?

_____
_____

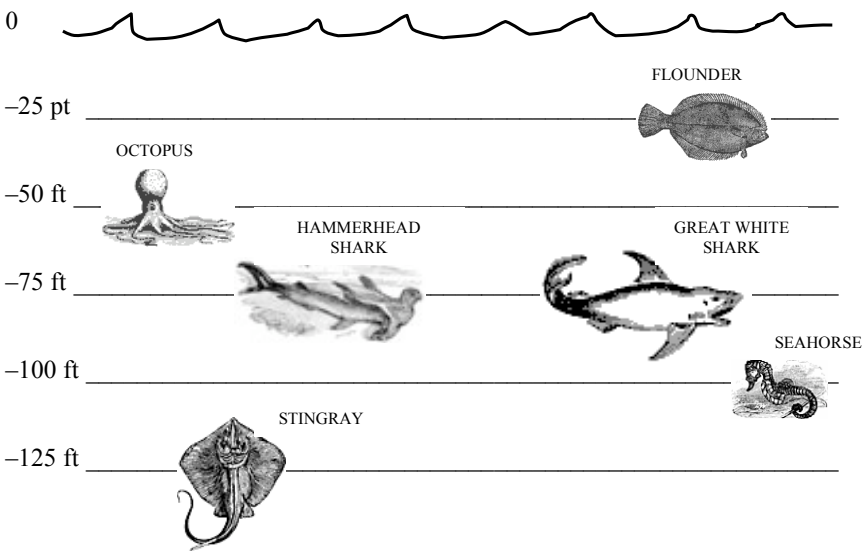
Depths of the Sea

Name: __ANSWER KEY___
Date: _____

Directions: Using the picture below, answer the following questions.

1. What sea creature is at a depth of –100 ft.? ___Seahorse_____
2. The stingray is how many feet below the surface? __–125 ft.____
3. Which two sea creatures are at the same depth?
   ___Hammerhead Shark and Great White Shark_____
4. What is the depth of the octopus? ___–50 ft._____
5. Give the absolute value for the following depths:

   a. | -25 | = 25 b. | 100| = 100 c. | -50 | = 50



Bonus: Which of these sea creatures do you like the most and why? Answers will vary

_____

_____

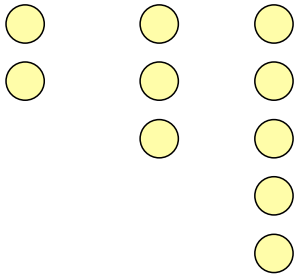
Adding Integers - Put It Together!

Name: _____
Date: _____

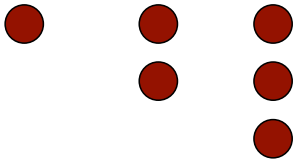
*REMEMBER: Same sign + same sign = same sign sum

Directions: Use red and yellow pencils to draw counters to represent each problem and your solution.

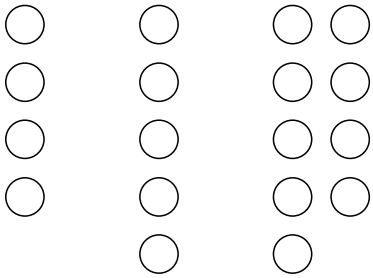
Sample: 2 + 3 = __5__



–1 + –2 = _–3_



(1) 4 + 5 = _____



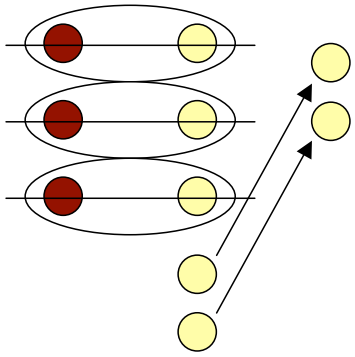
(2) –2 + –4 = ____

(3) $-5 + -5 =$ _____ (4) $8 + 2 =$ ____

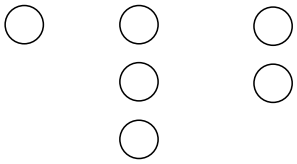
(5) $-1 + -8 =$ _____ (6) $-7 + -4 =$ ____

*REMEMBER: Different sign + different sign = subtract, and use the sign of the largest absolute value

Sample: –3 + 5 = __2__



–1 + 3 = ____



(1) –2 + 4 = _____

(2) – 3 + 2 = ____

(3) –1 + 8 = _____

(4) –7 + 4 = ____

*REMEMBER:	**Same sign + same sign = same sign sum **Different sign + different sign = subtract, and use the sign of the larger absolute value number

Directions: Solve each problem. Write your answer in the space provided.

Samples: $-2 + -3 = -5$ $-5 + 8 = 3$

(1) $5 + 6 =$ _____ (2) $4 + 3 =$ _____

(3) $7 + 4 =$ _____ (4) $8 + 3 =$ _____

(5) $-5 + -6 =$ _____ (6) $-4 + -3 =$ _____

(7) $-5 + -4 =$ _____ (8) $-8 + -1 =$ _____

(9) $-2 + -6 =$ _____ (10) $9 + 13 =$ _____

(11) $-8 + -2 =$ _____ (12) $-18 + -3 =$ _____

(13) $-15 + -6 =$ _____ (14) $-4 + 3 =$ _____

(15) $7 + -4 =$ _____ (16) $9 + -13 =$ _____

(17) $-17 + 3 =$ _____ (18) $-10 + 10 =$ _____

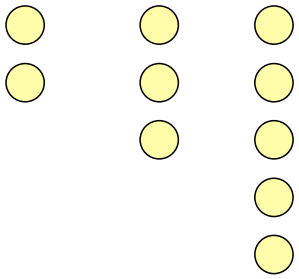
Adding Integers - Put It Together!

Name: __ANSWER KEY___
Date: _____

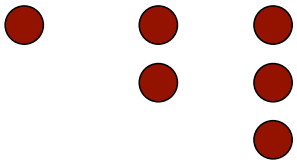
*REMEMBER: Same sign + same sign = same sign sum

Directions: Use red and yellow pencils to draw counters to represent each problem and your solution.

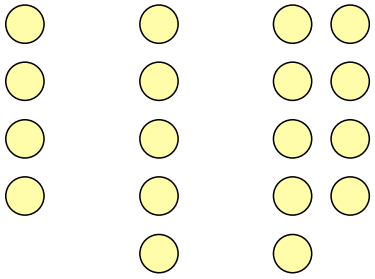
Sample: 2 + 3 = __5__



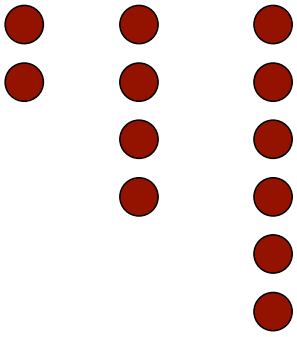
–1 + –2 = _–3_



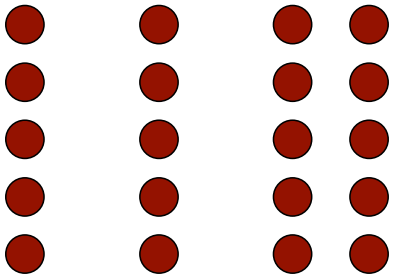
(1) 4 + 5 = ___9___



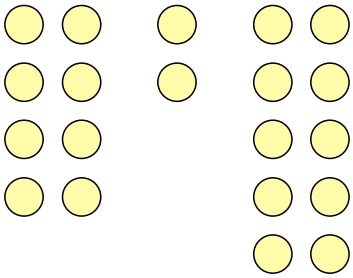
(2) –2 + –4 = _–6_



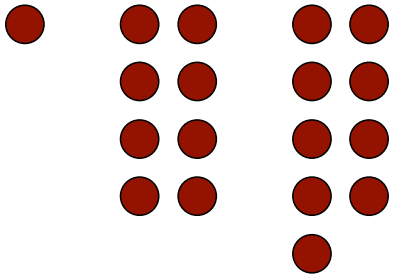
(3) –5 + –5 = _–10__



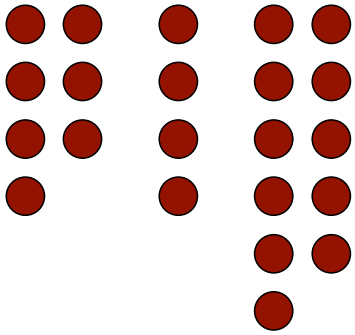
(4) 8 + 2 = _10_



(5) –1 + –8 = _–9__

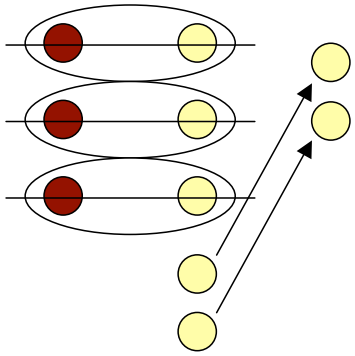


(6) –7 + –4 = _–11_

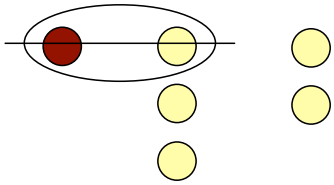


REMEMBER: Different sign + different sign = subtract, and use the sign of the larger absolute value number

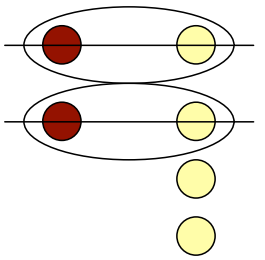
Sample: –3 + 5 = __2__



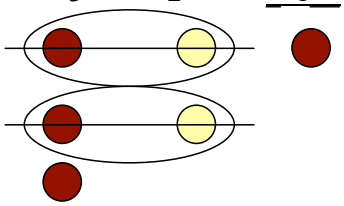
–1 + 3 = _2_



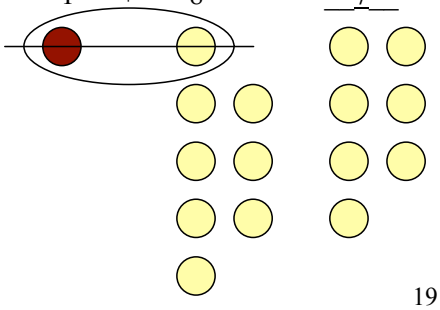
(1) –2 + 4 = __2__



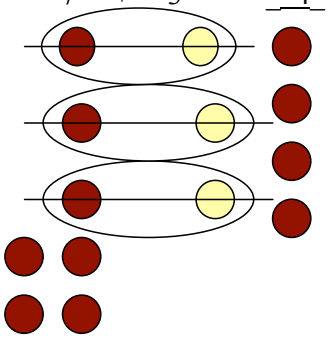
(2) – 3 + 2 = _–1__



(3) –1 + 8 = __7__



(4) –7 + 3 = _–4_



*REMEMBER:	**Same sign + same sign = same sign sum **Different sign + different sign = subtract, and use the sign of the larger absolute value number

Directions: Solve each problem. Write your answer in the space provided.

Samples: $-2 + -3 = -5$ $-5 + 8 = 3$

(1) $5 + 6 =$ __11_____

(2) $4 + 3 =$ __7_____

(3) $7 + 4 =$ __11_____

(4) $8 + 3 =$ __11_____

(5) $-5 + -6 =$ __–11_____

(6) $-4 + -3 =$ __–7_____

(7) $-5 + -4 =$ __–9_____

(8) $-8 + -1 =$ __–9_____

(9) $-2 + -6 =$ __–8_____

(10) $9 + 13 =$ __22_____

(11) $-8 + -2 =$ __–10_____

(12) $-18 + -3 =$ __–21_____

(13) $-15 + -6 =$ __–21_____

(14) $-4 + 3 =$ __–1_____

(15) $7 + -4 =$ __3_____

(16) $9 + -13 =$ __–4_____

(17) $-17 + 3 =$ __–14_____

(18) $-10 + 10 =$ __0_____

Subtracting Integers - Make It Happen!

Name: _____
Date: _____

*REMEMBER: Subtraction is "taking away/losing." Use Zero Pairs to "Make It Happen" if you do not have enough chips to "take away/lose."

*REMEMBER: Subtraction is same as "Adding the Opposite."

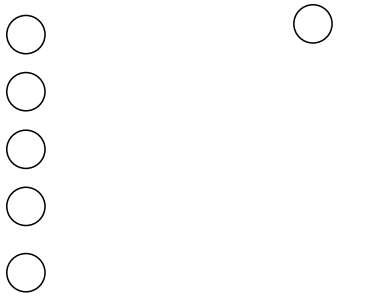
1. Change subtraction sign to addition.
2. Change the sign of the second number.
3. Follow rules for addition.

Directions: Use red and yellow pencils to draw counters to represent each problem and your solution.

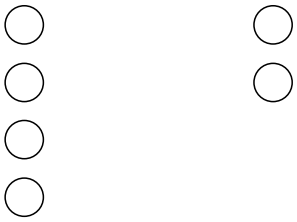
Sample: 3 – 2 = __1__

–2 – –1 = _–3_

(1) 5 – 4 = _____



(2) –4 – –2 = ____



(3) $-5 - -5 =$ _____ (4) $8 - 2 =$ ____

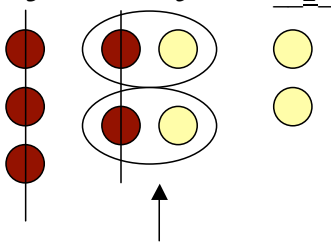
(5) $-7 - -5 =$ _____ (6) $-3 - -2 =$ ____

*REMEMBER: Subtraction is "taking away/losing." Use Zero Pairs to "Make It Happen" if you do not have enough chips to "take away/lose."

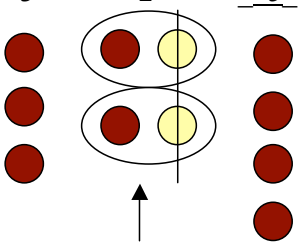
*REMEMBER: Subtraction is same as "Adding the Opposite."

1. Change subtraction sign to addition.
2. Change the sign of the second number.
3. Follow rules for addition.

Sample: –3 – –5 = __2__



–3 – 2 = _–5_



(1) –2 – –4 = _____

(2) – 3 – –5 = ____

(3) –1 – 4 = _____

(4) –5 – –6 = ____

*REMEMBER: Subtraction is "taking away/losing." Use Zero Pairs to "Make It Happen" if you do not have enough chips to "take away/lose."

*REMEMBER: Subtraction is same as "Adding the Opposite"

1. Change subtraction sign to addition.
2. Change the sign of the second number.
3. Follow rules for addition.

Directions: Solve each problem. Write your answer in the space provided.

Samples: $-2-(-3)=1$ $-5-8=-13$

(1) $14-6=$ _____

(2) $2-3=$ _____

(3) $7-(-4)=$ _____

(4) $-8-2=$ _____

(5) $-5-(-5)=$ _____

(6) $-4-(-9)=$ _____

(7) $-3-(-4)=$ _____

(8) $-6-(-10)=$ _____

(9) $-12-(-6)=$ _____

(10) $9-13=$ _____

(11) $-8-(-2)=$ _____

(12) $-18-(-3)=$ _____

(13) $-1-(-6)=$ _____

(14) $-4-3=$ _____

Subtracting Integers — Make It Happen!

Name: __ANSWER KEY___
Date: _____

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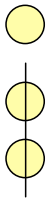
*REMEMBER: Subtraction is same as "Adding the Opposite."

1. Change subtraction sign to addition.
2. Change the sign of the second number.
3. Follow rules for addition.

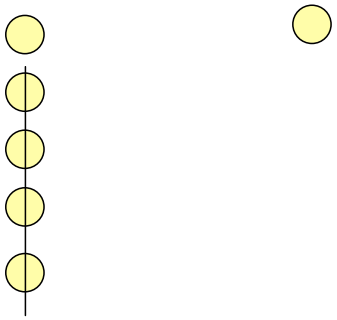
Directions: Use red and yellow pencils to draw counters to represent each problem and your solution.

Sample: 3 – 2 = __1__

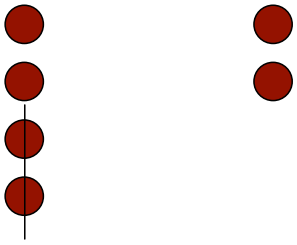


–2 – –1 = _–3_

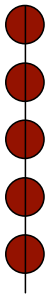
(1) 5 – 4 = __1___



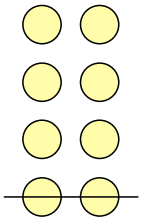
(2) –4 – –2 = _–2__

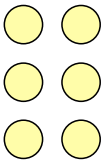


(3) –5 – –5 = __0__

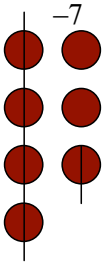


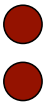
(4) 8 – 2 = _6_





(5) –7 – –5 = _–2_





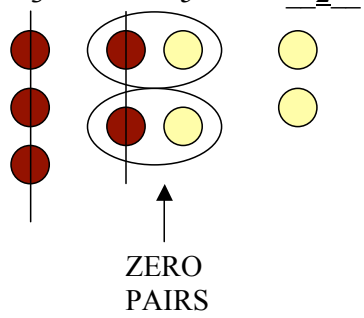
(6) –3 – –2 = _–1_

*REMEMBER: Subtraction is "taking away/losing." Use Zero Pairs to "Make It Happen" if you do not have enough chips to "take away/lose."

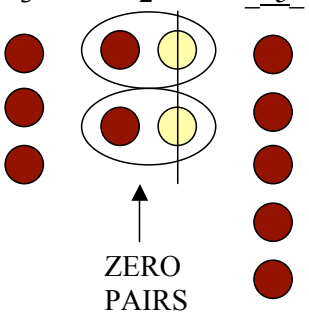
*REMEMBER: Subtraction is same as "Adding the Opposite."

1. Change subtraction sign to addition.
2. Change the sign of the second number.
3. Follow rules for addition.

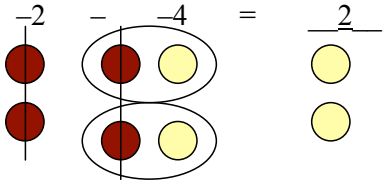
Sample: –3 – –5 = __2__



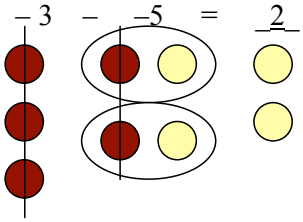
–3 – 2 = _–5_



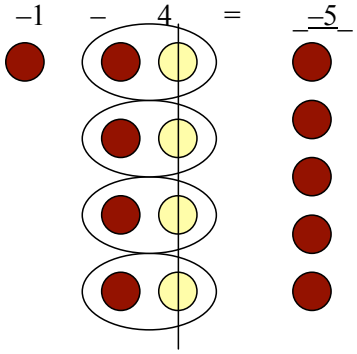
(1) –2 – –4 = __2__



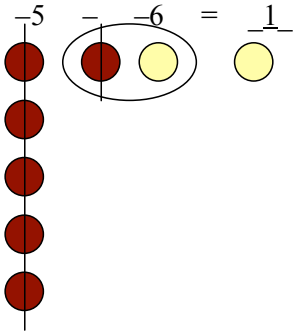
(2) – 3 – –5 = _2_



(3) –1 – 4 = _–5_



(4) –5 – –6 = _1_



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*REMEMBER: Subtraction is same as "Adding the Opposite"

4. Change subtraction sign to addition.
5. Change the sign of the second number.
6. Follow rules for addition.

Directions: Solve each problem. Write your answer in the space provided.

Samples: $-2-(-3)=1$ $-5-8=-13$

(1) $14-6=$ __8_____

(2) $2-3=$ __–1_____

(3) $7-(-4)=$ __11_____

(4) $-8-2=$ __–10_____

(5) $-5-(-5)=$ __0_____

(6) $-4-(-9)=$ __5_____

(7) $-3-(-4)=$ __1_____

(8) $-6-(-10)=$ __4_____

(9) $-12-(-6)=$ __–6_____

(10) $9-13=$ __–4_____

(11) $-8-(-2)=$ __–6_____

(12) $-18-(-3)=$ __–15_____

(13) $-1-(-6)=$ __5_____

(14) $-4-3=$ __–7_____

Integers: Adding and Subtracting
Quiz

Name: _____
Date: _____

***REMEMBER THE RULES! ***

Directions: Solve each problem. Write your answer in the space provided. Pay attention to the operation!

(1) 5 + (-6) = _____

(2) -4 + 3 = _____

(3) 12 – (-4) = _____

(4) -8 + 3 = _____

(5) -5 – (-6) = _____

(6) -4 – (-3) = _____

(7) -5 + (-4) = _____

(8) -1 – (-11) = _____

(9) -6 + (-6) = _____

(10) -9 + 13 = _____

(11) -8 – (-2) = _____

(12) -18 – (-3) = _____

(13) -16 – (-6) = _____

(14) -4 + 3 = _____

(15) 8 + (-4) = _____

(16) 6 – (-13) = _____

(17) -17 – 3 = _____

(18) -10 + 10 = _____

(19) Look at the data table below. Use your knowledge of integers to put the animals in order from shallowest to deepest.

ANIMAL	DEPTH
Starfish	–300 feet
Crab	–18 feet
Lobster	–250 feet
Snail	–2 feet

Shallowest _____

_____

_____

Deepest _____

Integers: Adding and Subtracting
Quiz

Name: _____
Date: _____

***REMEMBER THE RULES! ***

Directions: Solve each problem. Write your answer in the space provided. Pay attention to the operation!

(1) $5+(-6)=$ __ -1_____

(2) $-4+3=$ __ -1_____

(3) $12-(-4)=$ __16_____

(4) $-8+3=$ __ -5_____

(5) $-5-(-6)=$ __1_____

(6) $-4-(-3)=$ __ -1_____

(7) $-5+-4=$ __ -9_____

(8) $-1-(-11)=$ __10_____

(9) $-6+-6=$ __ -12_____

(10) $-9+13=$ __4_____

(11) $-8-(-2)=$ __ -6_____

(12) $-18-(-3)=$ __ -15_____

(13) $-16-(-6)=$ __ -10_____

(14) $-4+3=$ __ -1_____

(15) $8+-4=$ _4_____

(16) $6-(-13)=$ __19_____

(17) $-17-3=$ __ -20 _____

(18) $-10+10=$ __ 0 _____

(19) Look at the data table below. Use your knowledge of integers to put the animals in order from shallowest to deepest.

ANIMAL	DEPTH
Starfish	–300 feet
Crab	–18 feet
Lobster	–250 feet
Snail	–2 feet

Shallowest _____Snail_____

↓

↓ _____Crab_____

↓

↓ _____Lobster_____

↓

Deepest _____Starfish_____

Integer Cards

Name: _____
Date: _____

0	5
2	–3
6	–6
–2	1
3	7
4	–4
–1	–7

Gains and Losses

Name: _____
Date: _____

RULES

- One person will cut out the numbers from the bottom of the page.
- The other player will place the cut out numbers in a plastic cup.
- Each player will pick one number from the cup. The one who has the largest number will go first.
- Each player's chip will be placed on "START."
- Player #1 will draw a number from the cup. Whatever number is drawn, they will move their chip, in the appropriate direction, that many number of spaces. (Left for negative, Right for positive.)
- They will replace that number in the cup.
- Player #2 will then pick a number from the cup and move their chip the appropriate number of spaces appropriate.
- After each turn, the players will keep their chips on that numbered space. They DO NOT put their chip back at "START."
- They will repeat these steps until one of them lands on the "Touchdown" space or the "Opponent Score" space.
- Whoever lands on the "Touchdown" space first, receives 7 points. They then place their chips back at START and begin the process again.
- Whoever lands in the "Opponent Score" space first, gives their Opponent 3 points. They then place their chips back at START and begin the process again.
- Whichever player has the most points at the end of time, WINS! (Teacher determines the length of each game 5–10 minutes.)

OPPONENT SCORE	–3	–2	–1	START	1	2	3	TOUCHDOWN

–3	–2	–1	1	2	3

Name: _____
Date: _____

GO FOR THE MOST

1	7	–1	–12	–9	4
–6	14	–10	–16	15	–4
–3	–18	11	2	–13	9
8	–14	17	12	–5	–15
★	3	–7	–17	16	5
–2	13	–8	6	–11	10

Integer Card Duel

Name: _____

Date: _____

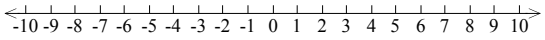
RULES

- You need a deck of regular playing cards (52 cards).
- Take out all of the Jacks, Queens, and Kings.
- You should have all of the numbered cards as well as the Aces. Each Ace is worth one and the number cards are worth the value of that card.
- **Black cards represent positive numbers and red cards represent negative numbers.**
- You can play with a minimum of two players.
- Players will keep track of their individual scores from each round but players should designate someone to be the scorekeeper for the group and record each player's score on the group scorecard.
- Before cards are dealt, one player determines the operation and how many cards will be dealt. (Addition or subtraction/minimum 3 cards; maximum 6 cards.)
- Once the operation and numbers of cards is determined, dealer will deal out the appropriate number of cards.
- Players arrange the cards in such an order that will get them the highest possible score.
- Once every player has had a chance to arrange their cards, they then show their cards to the other players, saying their score as well as telling how they arrived at their answer (paper/pencil may be used to assist students).
- Whoever ever has the highest total wins that round. Cards are collected and the winner chooses the operation and number cards for next round.
- A total of three rounds will be played. After the three rounds are played, then each player will add their scores from each round for a grand total. Whoever has the highest grand total, wins the overall duel.

CUT

Name	# of cards / +/–	Rd.1 **Score**	# of cards / +/–	Rd.2 **Score**	# of cards / +/–	**Rd.3** Score	**Grand Total**

Labeled Number Line, for Reteaching



Blank Number Line, for Reteaching